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Abstract: *»Ein zweischneidiges Schwert: Telekommunikation und imperiale Kontrolle in Britisch-Indien«*. Britain introduced telegraphs in its colonial empires in order to tighten its control over its subjects. Thus, the British in India used their new telegraph lines to repress the Indian Mutiny of 1857 and hastened thereafter to lay cables from England to India and around Africa. Imperialists extolled the advent of telegraphy as establishing permanent ties to their colonies, often comparing these ties to the Roman roads and postal system. Telecommunications had another effect, however, namely it spread the news from distant places, thereby undermining the colonial status quo. News of the Japanese victory over Russia in 1905 had a galvanizing effect on the nationalist movement in India and the Swadeshi agitation in Bengal. Later, news of the activities of Gandhi and his followers brought Indians from different regions together in a way that could not have happened in the mid-nineteenth century. Thus the hopes that the imperialists placed in the controlling powers of telecommunication proved to be misplaced.

Keywords: Communications, telegraph, East India Company, Dalhousie, Indian Rebellion, steamships, P&O, submarine telegraph cables, Eastern Telegraph Company, news agencies, Reuters, Curzon, Swadeshi, Russo-Japanese War, Gandhi, Nehru, globalization, nationalism, fragmentation.

Technological change produces unexpected consequences. Nowhere is this clearer than in the case of communication. Throughout history, governments have invested enormous sums in communication networks designed to bind their far-flung outposts into cohesive empires. Even the earliest empires considered efficient communications essential to their survival. King Darius of Persia built a 2,700-kilometer-long Royal Road from his capital Susa to Sardis on the Aegean Sea and posted fresh horses every few dozen kilometers for his couriers; as the Greek historian Herodotus noted,

> there is nothing in the world that travels faster than these Persian couriers. . . . Neither snow, nor rain, nor heat, nor darkness of night prevents these couriers from completing their designated stages with utmost speed.

The Romans also understood the need for efficient communications. Using their superb network of roads and relay stations, couriers of the *cursus publicus* carried government messages and important officials traveled at government

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expense. Likewise the Incas built a network of 40,000 kilometers of graded footpaths along which runners carried messages throughout the empire. Similar courier networks existed in China and in the Mongol empire as well.

In modern times, such networks have been essential elements in the formation of a global economy. The most complete of all networks was the one that the British built in the nineteenth century to communicate with and control their far-flung colonial empire. Yet this network was the means of challenging and undermining the very empire that created it.[1] This is the story of that network and how it contributed to the downfall of British rule in India.

India was by far the most important colony of Great Britain, arguably more important than all the other colonies of all the European powers put together. By the mid-nineteenth century, the East India Company ruled the Indian subcontinent much as the Mughals had done before it, namely by occupying a few strategic cities and siphoning off the wealth of the countryside through taxation, while leaving the underlying social structures and customs untouched. This laissez-faire approach changed suddenly with the appointment of a new governor-general, the Marquess of Dalhousie, who ruled India from 1848 to 1856. Dalhousie was a radical modernizer, impatient to bring India into the modern world. In 1852, he wrote to the Court of Directors of the East India Company in London:

> Everything, all the world over, moves faster now-a-days than it used to do, except the transactions of Indian business. What with the number of functionaries, boards, references, correspondences, and several Governments in India, what with the distance, the reference for further information made from England, the fresh correspondences made from that reference, and the consultation of the several authorities in England, the progress of any great public measure, even when all are equally disposed to promote it, is often discouragingly slow.[2]

One of Dalhousie's initiatives was the Post Office Act of 1854, designed to replace the hodge-podge of local and provincial postal services with a single unified postal service for all of British India. At first, letters were carried by runners, but as the amount of mail grew, the runners were supplemented with mail carts and boats. The number of post offices grew rapidly, from 700 in 1854 to 12,970 in 1900. By then every small town had a post office, from which runners carried the mail to outlying villages. Dalhousie's reforms

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[1] This essay is based in part on two of my books: The Tentacles of Progress: Technology Transfer in the Age of Imperialism, 1850-1940 (New York: Oxford University Press, 1988) and The Invisible Weapon: Telecommunications and International Politics, 1851-1945 (New York: Oxford University Press, 1991).

[2] William B. O'Shaughnessy, *The Electric Telegraph in India* (London, 1853), xi-xii.

brought postal service within the means of millions of Indians for the first time.[3] As the Indian economist Mahindra Nath Das observed:

> The post office penetrated into innumerable villages of India. . . . The post office also played an important role in breaking down the static nature of Indian society. . . . Judged from whatever angle, social, cultural, educative or economic, the half-anna postal system of Lord Dalhousie played a remarkable role in the progress of India.[4]

Dalhousie was also responsible for introducing the telegraph to India. To construct a network, he turned to William O'Shaughnessy, an army surgeon who had experimented with telegraph wires twenty years earlier. Dalhousie sent O'Shaughnessy to England to obtain the approval of the East India Company and to purchase enough wire and equipment to build a 10,000-kilometer-long network. The construction of the trunk lines connecting the major cities began in 1853. One year later, Dalhousie wrote to a friend about telegraph service between Calcutta and Bombay. "In less than one day the Government made communications which, before the telegraph was, would have taken a whole *month* – what a political reinforcement this is!"[5]

In 1857 the uprising that the British called the "Sepoy Mutiny" and the Indians called the "Indian Rebellion" broke out in Hindustan. Though only the trunk lines were completed by then, the British found the telegraph indispensable in crushing the uprising. As the correspondent of *The Times* wrote during the Rebellion: "Never since its discovery has the electric telegraph played so important and daring a role as it does now in India; without it, the Commander-in-Chief would lose the effect of half his force."[6] Or, as a British official exclaimed after the Rebellion: "The Electric Telegraph has saved India."[7] He meant for the British, of course.

As soon as it had crushed the uprising, the government rushed to put up more telegraph lines. By 1865, the network was 28,000 kilometers long. In 1900 the telegraph service had over 84,000 kilometers of land lines connecting 4,949 telegraph offices in towns and cities, and carried several million telegrams a year, with runners to carry telegrams to and from small villages. By

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[3] On the history of postal service in India, see H. Noor Ahmed, *India Post Through the Ages: A Saga of Communications* (Kurnool: Postal History Society India, 1995); Mohini Lal Majumdar, *The Imperial Post Offices of British India, 1837-1914* (Calcutta: Phila Publications, 1990); and Geoffrey Clarke, *The Post Office of India and Its Story* (London: John Lane, 1921).

[4] Mahindra Nath Das, Studies in the Economic and Social Development of Modern India: 1848-56 (Calcutta, 1956), 198-99.

[5] Quoted in Krishnalal Shridharani, *Story of the Indian Telegraphs: A Century of Progress* (New Delhi, 1956), 21.

[6] Chandrika Kaul, *Reporting the Raj: The British Press and India, c. 1880-1922* (Manchester: Manchester University Press, 2003), 42.

[7] Mohini Lal Majumdar, *Early History and Growth of Postal System in India* (Calcutta: Rddhi-India, 1995), 252

independence in 1947, India had a 185,000 kilometers of telegraph lines. The rate was one rupee per sixteen-word message, much lower than in Europe or North America. Telegraphy was cheap enough for the Indian middle class as well as for the British, and contributed to the development of a large internal market.

The most dramatic of Dalhousie's modernization projects was the construction of railroads. Construction began in 1850 and the first locomotive pulled the first train in 1853. The Indian railways soon attracted more capital than any other form of enterprise in any European colony. As a result of this heavy investment, the Indian railway network surpassed that of Great Britain in length in 1895. Although British enterprises built the railroads for British purposes, such as transporting freight, soldiers, and officials, rail travel soon proved popular among ordinary Indians as well, even the poor. At the same time, they revolutionized the postal system in India. Mail that had been carried at 4 or 5 kilometers per hour on the back of runners now traveled ten times as fast. Beginning in 1864, the practice of sorting the mail in special railway cars speeded up the efficiency of the system yet more. By the end of the century, for example, a letter from Bombay might reach Calcutta the next day, compared with two weeks or more in 1850.

Communications between Britain and its colonies also accelerated sharply in the second half of the nineteenth century. Until the 1830s, mail between Britain and India traveled on the East India Company's lumbering galleons that sailed around Africa and took from four to six months each way, with months in port at either end waiting for the right winds. Correspondents had to wait a year, and sometimes two years, to receive answers to their letters. Slightly faster transport was possible via the so-called Overland Route through Mesopotamia and Syria, but at considerable risk from bandits and outbreaks of the plague.

This situation changed in 1830, when the steamer *Hugh Lindsay* steamed from Bombay to Suez in thirty-one days; the letters it carried reached London twenty-eight days later, having crossed Egypt, the Mediterranean Sea, and Europe from the Adriatic to the English Channel. Soon there was monthly steamship service between Bombay and Suez, coordinated with Admiralty packet boats sailing between Alexandria and England. In 1837 a new shipping company, the Peninsular and Oriental Steam Navigation Company, or P&O, received a contract to transport the mail between England and Egypt. By 1858 the P&O had fifty-five ships carrying mail and passengers between England and Alexandria and between Suez and India and beyond. The time needed to travel from England to India dropped to four to six weeks, and a correspondent could expect to get an answer to a letter in less than six months. The opening of the Suez Canal in 1869 and the development of faster steamships shortened the trip even more. By 1913 a sea voyage from England to Bombay took twenty-one days by sea, or only thirteen days if one took the train to Brindisi at the southern tip of Italy and embarked on the steamer there. Although sailing ships

continued to play a role in coastal trade and in the Pacific Ocean, by the end of the nineteenth century they had been replaced by steamers on the heavily traveled routes between Europe and India.

By 1860 the British government was paying almost one million pounds sterling a year – a fortune in those days – for mail contracts to various shipping lines. These subsidies ensured that the mails were handled safely and expeditiously and carried on the fastest, safest, and most advanced ships available anywhere in the world. After the opening of the Suez Canal in 1869, postal communications with British colonies east of Suez became increasingly vital to the prosperity and security of the empire.

Intercontinental telegraphy followed the same trajectory as shipping and domestic telegraph lines, but with a few years' delay. Though France and Britain had been aware of the value of internal telegraphs since the French Revolution, overseas telegraphy had to await the development of submarine telegraph cables in the 1850s and '60s. During the Crimean War of 1854-55, a combination of land lines and short submarine cables allowed the French and British governments to interfere actively in the conduct of operations, while their respective publics followed the news on a day-to-day basis thanks to telegraphic dispatches from war correspondents at the front.[8]

As soon as that war ended, several British entrepreneurs proposed to lay telegraph lines to India. Before work could begin, the Indian Rebellion broke out in May 1857. News of that event did not reach London until forty days later. News stories published in the British press were all based on lurid reports by the English papers in India about the atrocities perpetrated by savage Indians.[9] In a panic, the British government signed a fifty-year contract for a cable to be laid along the bottom of the Red Sea and the Indian Ocean between Suez and Bombay. But the technology was not yet mature, for the cable ships had laid the cable too taut along the rocky bottom of the Red Sea and it broke before it could transmit a single message.

Though the first cable proved a disappointment, the demand remained as strong as ever. In 1865 a land line through the Ottoman Empire from Constantinople to the Persian Gulf connected the European telegraph network with a cable to India. Telegrams crossed so many national borders and were relayed so many times, however, that the average message took six days, eight hours, and forty-four minutes to reach its destination. Another land line, this one across Prussia, Russia and Persia, provided an alternate route, but was even

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[8] On the history of submarine telegraph cables, see Charles Bright, *Submarine Telegraphs: Their History, Construction and Working* (London: Lockwood, 1898), and Headrick, *The Invisible Weapon*, chs. 2-6.

[9] Simon J. Potter, "Webs, Networks, and Systems: Globalization and the Mass Media in the Nineteenth- and Twentieth-Century British Empire," *Journal of British Studies* 46 (2007): 629.

slower, with an average delay of seventeen days, five hours, and five minutes.[10] Sending a telegram over these lines was extremely expensive, costing two pounds seventeen shillings for twenty words. Moreover, both lines were unreliable, for they were often interrupted by bad weather or broken by bandits, and their operators, few of whom knew English, frequently garbled the messages. The British government also worried about its important messages passing through so many foreign hands.

In 1870, the Eastern Telegraph Company laid a cable from Suez to Bombay, thereby completing a connection between Britain and India that was entirely in British hands.[11] Britain finally had fast – albeit very costly – communications with its principal colony. With the laying of a submarine cable all the way, the time it took a message to travel between London and Bombay dropped to six hours. By the end of the century, most telegrams made the trip in one to two hours.

The British were justifiably proud, not only of their technical accomplishments, but also of the political and cultural bonds that the new communications media forged. J. Henniker Heaton, an Australian who became a member of the British Parliament and an advocate for lower postage and telegraph rates, told the Royal Colonial Institute in 1887:

> Now it is often gloomily predicted by purblind students of history that this tremendous agglomeration [the British Empire] must inevitably break up and dissolve, like its predecessors. "Where," they ask, "are the Greek, the Roman, the Spanish, the Napoleonic Empires? What is there in the British Empire to preserve it from the fate of these?" I venture to reply, that in the postal and telegraph services of the Empire our Queen possesses a cohesive force which was utterly lacking in former cases. Stronger than death-dealing warships, stronger than the might of devoted legions, stronger than wealth and genius of administration, stronger even than the unswerving justice of Queen Victoria's rule, are the scraps of paper that are borne in myriads over the seas, and the two or three slender wires that connect the scattered parts of her realm.[12]

Beneath this rosy picture, however, lurked problems that Mr. Heaton had not foreseen. One was the cost of operating mail steamers and telegraph cables, a cost that was far greater than even the British government could afford. Hence there was never a possibility of restricting these new communications media to government messages, as had been the case with the Royal Road of Persia or the Roman *cursus publicus*. To defray their staggering cost, the British telegraphic and postal networks were opened to the public from the start.

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[10] Margarita Barnes, Indian Press*: A History of the Growth of Public Opinion in India* (London: Allen & Unwin, 1940), 244.

[11] Headrick, *The Invisible Weapon*, 24.

[12] J. Henniker Heaton, "The Postal and Telegraphic Communications of the Empire," *Proceedings of the Royal Colonial Institute* 19 (1887-88): 172.

But so high were the rates that only the wealthiest individuals could afford to send telegrams to India, Australia, and other distant places.

Besides governments, the cable companies relied on three kinds of customers: shipping companies, traders, and news agencies. To the shipping and trading companies, telegraphy was indispensable. Even sailing ships' captains reported to their home offices whenever they reached a port.[13] As for steamships, they were so expensive that they had to be used almost continually to their maximum capacity. To make the most efficient use of steamers, merchants needed up-to-date information about prices, supplies, markets, and other factors that could influence their business. News agencies arose to provide this information, as well as to supply news from foreign countries to newspapers.

Among news agencies, Reuters was the first and most important.[14] In 1850, soon after the first Prussian telegraph line was opened, Julius Reuter set up shop in Aachen in western Germany to communicate with Bernhard Wolff in Berlin, at the other end of the line. In 1851, when the first submarine telegraph cable was laid across the English Channel, Reuter moved to London and opened an office there and another one in Paris. In 1866, as soon as regular telegraphic communications with India was established, Reuter opened an office in Bombay; two years later, his company opened offices in Calcutta, Karachi, and Madras, as well as in Ceylon, Singapore, Hong Kong, Java, and Australia.

By the early twentieth century, Reuters controlled the news of the British Empire and most of Asia, leaving the rest of the world to the French company Agence Havas, the German agency Wolff, and the American Associated Press. Of all of Reuters' markets, India was the most profitable, employing up to one out of four of its correspondents. Thanks to its close ties with the British and Indian governments, Reuters handled almost all the news between India and the rest of the world. It received a special subsidy to supply the India Office in London with news and to diffuse India Office press releases. After buying up the two independent Indian news agencies, the Associated Press of India and the Indian News Agency, it also dominated the internal Indian news market. Reuters and its affiliates tied the empire together, but its web was entirely radial, with London at its center and very little direct communication among the other parts of the empire.

In the laissez-faire atmosphere of nineteenth century Britain, there was little question of manipulating the news. Not only was this contrary to the liberal

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[13] Yrjö Kaukiainen, "Price of Prejudice: The Diffusion of Telegraphy in Finnish 'Blue-Water' Tramp Shipping," (paper read at the Conference on Telecommunication and Globalization, University of Heidelberg, September 2009).

[14] On Reuters, see Jonathan Fenby, *The International News Services* (New York: Schoken Books, 1986), chs. 2 and 3, and Donald Read, *The Power of News: The History of Reuters*, 2nd ed. (New York: Oxford University Press, 1999).

tradition of British government, but it was reinforced by the assumption that all British actions were benevolent, so there was no reason to censor the news. In British eyes, everyone in the Empire, if not the entire world, would benefit from knowing the truth as presented by the British media. Nonetheless, the government of India, nervous about the attitude of Indians after the Rebellion of 1857, passed the "Vernacular Press Act" of 1878 that allowed it to censor Indian-language papers and to close offending ones and seize their machines and paper. But as this law did not apply to English-language papers, some Indian papers escaped the censor by switching to English.[15]

The British government's attitude toward the press began to change at the end of the century. In the South African or Boer War of 1899 to 1902, Britain censored communications not only between south Africa and Europe, but also between other European nations and their African colonies south of the Equator. Such censorship was justified by military necessity in time of war and was quickly lifted at the end of the hostilities, but it had demonstrated without a doubt the power of communication control in wartime.

If information was a weapon of war that gave the advantage to Britain, it also had a corrosive effect on Britain's hold on its empire. This was the unexpected consequence of modern communications. The Indian Rebellion of 1857-58 had failed largely because it was localized in Hindustan and did not spread to Bengal or to southern or western India. Until the end of the century the very idea of India was a British concept. Most of the people of the sub-continent identified themselves not as Indians, but by their caste, their religion, their language, and the region they lived in. In Europe, nationalist campaigns aroused the interest of intellectuals in the folklore of common people; thus in Germany, Johann Gottfried von Herder and the brothers Jakob and Wilhelm Grimm collected folk tales, ballads, myths, and nursery rhymes as a means of asserting German national identity against the French. In India, however, the revival of interest in folklore emphasized not only pre-colonial culture, but also Tamil and Dravidian cultures against the dominance of upper-caste Hindu and Sanskrit culture.[16]

Only in the eighteen-eighties and nineties did the belief that the various peoples of India had a common identity and destiny begin to penetrate the class of educated English-speaking Indians who served the Raj in clerical and minor administrative posts. Among them were the founders of the Indian National Congress who expected, in exchange for loyally serving the Raj, to be treated with respect and allowed to rise to higher positions in the bureaucracy. Several prominent Indians such as Dadabhoi Naoroji and Gopal Krishna Gokhale at-

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[15] Swaminath Natarajan, *History of the Press in India* (New York: Asia Publishing House, 1962), 94.

[16] Stuart H. Blackburn, *Print, Folklore, and Nationalism in Colonial South India* (Delhi: Permanent Black, 2003), 154-71.

tended conferences of the Socialist International in Europe.[17] What made them conscious of their common Indian-ness was their shared ability to speak English and their common experiences of racial discrimination. But so was their ability to communicate throughout the sub-continent by mail, telegraphs, and railroads. In the formation of Indian consciousness, the means of communication proved as important as the motivations.

1904 and 1905 were key years in the history of the Indian independence movement. In January 1904, Viceroy Lord Curzon announced that he planned to divide Bengal, the largest and richest Indian province, into two smaller provinces for administrative convenience. This plan aroused intense opposition in Bengal, not only among educated English-speaking Indians and the mercantile middle class, but also among peasants and workers. In protest against the partition, a movement called *Swadeshi* or "our land" arose in Calcutta to call for a boycott of British goods. Led by a newspaper campaign, especially in *The Bengalee,* a newspaper owned by the nationalist Surendranath Banerjee, the movement swept through Bengal. The Indian government, meanwhile, had lowered the rates of press telegrams and the cost of registering newspapers, contributing thereby to the diffusion of news throughout the sub-continent.[18] As news of the protests and boycott was distributed by mail and telegraph, the movement quickly spread to other parts of India.

In the midst of this growing turmoil came news that a Japanese army had defeated a Russian army at Mukden in Manchuria on March 10, 1905 and that the Japanese navy had sunk the Russian fleet at the battle of Tsushima Strait on May 27 and 28. The British government was pleased by these events, for it had long considered Russia a dangerous rival in Central Asia and a potential threat to India and had recently signed a treaty of alliance with Japan. The British prime minister, Arthur Balfour, told the House of Commons: "I am not intending to lead the House to suppose that . . . a war with Russia . . . is either possible or probable."[19]

Educated Indians, however, did not interpret the Japanese victory as a blessing for the British Empire, but as the victory of an Asian nation over a European one, the first such victory since the Mongols conquered Russia seven centuries before. Jawaharlal Nehru, then a boy of fourteen, recalled: "The next important event that I remember affecting me was the Russo-Japanese War. Japanese victories stirred up my enthusiasm, and I waited eagerly for the pa-

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[17] Deep Kanta Lahiri Choudhury, "The Sinews of Panic and the Nerves of Empire: The Imagined States' Entanglement with Information Panic, India, c. 1880-1912," *Modern Asian Studies* 38, no. 4 (2004): 973.

[18] Lahiri Choudhury, "Sinews of Panic," 975-76.

[19] House of Commons, *Parliamentary Papers*, Fourth Series, vol. CXLVI, 1905, 79, quoted in R. P. Dua, *The Impact of the Russo-Japanese (1905) War on Indian Politics* (New Delhi: S. Chand & Co., 1966), 16.

pers for fresh news daily."[20] The nationalist press greeted these events with glee. On March 28, after the Japanese victory at Mukden, *The Daily Hitavadi* of Calcutta wrote:

> With the victory of Japan, signs are visible of the awakening of a new life . . . looking forward to enjoying equal rights with the white subjects of Britain. The employment of Indians in increasing numbers in the higher offices of States; the meting out of equal justice between black and white . . . these are the points to which the aim of educated Indians is now-a-days prominently directed.[21]

And on June 14, 1905, Banerjea's *The Bengalee* wrote:

> We feel that we are not the same people as we were before the Japanese successes. . . . For the first time in modern history Asia has triumphed over Europe and has vindicated its equality in the knowledge of those arts which have their cradle in Europe and which have made Europe what she is.[22]

The most militant nationalists found inspiration not in the victory of Japan over Russia, but in the Russian Revolution of 1905 and in the anarchist, nihilist, and social revolutionary movements that convulsed the Russian Empire following its defeat. Some advocated making bombs and assassinating British officials and other terrorist acts. On August 12, 1907, the radical newspaper *Yugantar* (meaning New Era) wrote:

> There is another good means of acquiring strength of arms. Many people have observed in the Russian revolution that there are many partizans of the revolutionaries among the Czar's troops. These troops will join the revolutionists with various arms.[23]

Gandhi himself is supposed to have called the Russian Revolution of 1905 "the greatest event of the present century" and "a great lesson to us all."[24]

For several years after 1905, nationalist agitation and sporadic acts of violence continued to convulse India and arouse fear among the British. A strike by telegraph employees, quickly spread by telegraph throughout India and Burma in the spring of 1908, threatened the "nervous system" of the Indian

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[20] Jawaharlal Nehru, *Toward Freedom* (Boston: Beacon Press, 1958), p. 29. See also Cemil Aydin, "A Global Anti-Western Moment? The Russo-Japanese War, Decolonization, and Asian Modernity," in *Competing Visions of World Order: Global Moments and Movements, 1800s-1930s*, ed. Sebastian Conrad and Dominic Sachsenmaier (New York: Palgrave Macmillan 2007), 213-36.

[21] Dua, *The Impact of the Russo-Japanese* (1905) War, 29.

[22] Quoted in Sankar Ghose, *The Western Impact on Indian Politics (1885-1919)* (Bombay: Allied Publishers, 1967), 90. See also Madan Gopal, *Freedom Movement and the Press: The Role of Hindi Newspapers* (New Delhi: Criterion Publications, 1990), 8.

[23] Ramesh Chandra Majumdar, *History of the Freedom Movement in India* (Calcutta: Firma K. L. Mukhopadhyay, 1962), 2: 271-72.

[24] Arun Kumar Singh, "Impact of Events in Russia on Indian Nationalism," (Ph.D. dissertation, B. B. Ambedkar Bihar University, Muzaffarpur, India, 2005), 54. I am indebted to Dr. Jagdish Sinha of the University of Delhi for this reference.

Empire. It only ended when the government granted concessions to its European and Eurasian signalers but dismissed many temporary and underpaid Indian peons and clerks, thereby hardening community identities.[25]

In response to the unrest and the Swadeshi movement, the government of India passed the "Newspapers (incitement to offenses) Act" of 1908 and the "Indian Press Law" of 1910, making it illegal to print anything that was likely "to bring into hatred or contempt His Majesty or the Government. . . or to incite disaffection toward His Majesty or the said Government. . . ."[26] A few British-owned newspapers protested, but most ceased criticizing the government's policies and became mouthpieces for the bureaucracy. Indian newspapers, however, were hard hit; by 1919, 350 presses and 300 newspapers were fined and 200 presses and 130 newspapers prevented from starting up.[27]

But by then it was too late. There were many newspapers in India, both in English and in Indian languages, and even more numerous small printing presses, many of them not registered with the government. The Indian government did not have the staff to read and censor them all. Besides, most of its employees were English-speaking Indians whose sympathies lay with the nationalists. Increasing government censorship and the closing or fining of newspapers only exacerbated the tensions between the British and their Indian nationalist opponents and stimulated the rise of underground newspapers and pamphlets.

During the First World War, Great Britain used every means possible to cut or intercept communications between the Central Powers and the rest of the world and tightly controlled the news in and out of India. In exchange for supporting Britain in its struggle against Germany, many Indians expected that their loyalty and financial contributions to Britain would be rewarded with greater political autonomy and participation in government after the war. Instead, the British passed the Rowlatt Act of March 1918 making wartime censorship permanent and allowing the government to imprison without a trial anyone suspected of sedition or conspiracy. The act led to riots and strikes in several parts of India. In April 1919, when thousands demonstrated against the Rowland Act in the city of Amritsar, Brigadier General Reginald Dyer ordered his soldiers to fire on them. Hundreds of unarmed Indians were killed and several thousand others were wounded. News of this event flashed across India, inflaming relations even further.

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[25] Deep Kanta Lahiri Choudhury, "India's First Virtual Community and the Telegraph General Strike of 1908," *International Review of Social History* 48 (Special Supplement 2003): 45-71; idem, "Representation and Sedition in the Telegraph General Strike of 1908," in *Beyond Representation: Colonial and Postcolonial Constructions of Indian Identity*, ed. Cripin Bates (New Delhi: Oxford University Press, 2006).

[26] Gopal, *Freedom Movement and the Press*, 168-70.

[27] Hemendra Prasad Ghose, *The Newspaper in India* (Calcutta: University of Calcutta Press, 1952), 61.

By then, Mohandas K. Gandhi had emerged as the leader of the Indian National Congress. Gandhi's life is the subject of countless biographies and hagiographies; the library of the University of Chicago alone carries 868 books on Gandhi, and that is only a partial selection. Yet in this vast literature, Gandhi's non-violent philosophy and charismatic personality have completely overshadowed another side of the man, namely his extraordinary ability to organize a vast and often secret movement across a large nation under the noses of the British administration. To do so he relied on the very communications media that the British had blithely introduced to India less than a hundred years before. Whenever he was out of jail, he traveled widely on the railroads, making speeches to rapt audiences. Though he preached a return to a simpler life using village technologies, he was quite willing to use the telegraph and the telephone in the interests of his cause. He spread his ideas though the newspapers he edited, including *Harijan*, *Young India*, and *Navajivan.* From these papers, his ideas were picked up by other newspapers.

When Gandhi was in jail or on the road, the Central Directing Body of the Indian National Congress, led by that other great organizer Jawaharlal Nehru, stayed in touch with the regional offices of the independence movement by telegraph and letters. The Indian independence movement was not only a political tug-of-war between the British government and Indian nationalists, it was also a conflict over information. Indian nationalists made good use of the printing press, the telegraph, the postal system, and the railroads that the British had introduced. Meanwhile, saboteurs brought down telegraph lines, depriving the government of essential means of communication at strategic moments in the struggle.

Gandhi was acutely conscious of the value of publicity, not only within India, but internationally as well. His way of life – his homespun garments, his vegetarianism, his sexual abstinence – were an integral part of his philosophy of non-violence, but they were also calculated to make him stand out among all the other political figures of his time. As a result he attracted a great deal of international attention. Reporters like Louis Fisher and photographers like Margaret Bourke-White and Henri Cartier-Bresson came to interview and photograph him for the Western press. In 1931, he was selected as "Man of the Year" by *TIME* magazine. When he was invited to London as representative of the Indian National Congress, the British left-wing press adulated him.

During the Second World War, Gandhi demanded that the British leave India. In response to his Quit India movement, the government jailed many dissidents and imposed strict censorship. Congress leaders retaliated by ordering the disruption of government communications, cutting telegraph wires and calling for railroad strikes. In the face of press and telegraph censorship, the party had

handbills, leaflets, and posters printed in secret and distributed by couriers.[28] Only harsh military rule allowed Great Britain to hold onto India for the duration of the war.

I have used India as a case study, both because it was the most important of the European colonial possessions, and because it illustrates the unpredictable consequences of innovations in communication technologies. The modernization program that Dalhousie had instituted in India was designed to make Britain's presence on the sub-continent profitable and permanent. Instead, it undermined British rule. Historians attribute the decolonization of India to a concept called nationalism and a change in the culture of India that united people from different regions and of different ethnicities and languages into one nationality. But what made nationalism possible in such a vast and culturally diverse land was the new communications media: the postal system, the railroads, the telegraph, the printing press, and the telephone. The increasing ability of Indians to acquire and disseminate ideas and information, using the very media of communication that the British had introduced, did not make British rule permanent, but undermined it instead.

The events in the history of India that I have just described were but a precursor of the world we live in. We often characterize today's world by highlighting the globalization of trade and culture. By globalization we mean that the economies of the world are becoming ever more interdependent and its cultures more homogeneous. As goods, money, and information flow around the world in ever-increasing quantities, wealthy nations and large corporations control an ever-larger share of the world economy and disseminate their cultural products. So much of what we call globalization consists of such services as finance, entertainment, news and other information transmitted and diffused around the world, and trade consists increasingly of intangibles like software, films, music, and other forms of intellectual property. This whole process is based on astounding technological innovations: television with hundreds of channels, the Internet, mobile telephones, and multi-media devices of all sorts, all connected by satellites, fiber-optic cables, and digital wireless transmitters. Almost all of these technologies originated in Europe and America, and have contributed to the globalization of a world economy dominated by a few wealthy nations.

Yet we can also describe the world by its increasing political fragmentation. Three major empires – the Russian, Austro-Hungarian, and Ottoman – fell apart after World War I. After World War II, the European colonial powers lost their colonies, as did the United States and Japan. The same British hegemony in global telecommunications that had contributed to its victory over Germany in two world wars helped undermine its empire. In turn, some of the former

[28] V. T. Patil, *Gandhi, Nehru and the Quit India Movement: A Study in the Dynamics of a Mass Movement* (Delhi: B. R. Publishing Corporation, 1984), 41-44.

colonies broke apart: Korea was divided in two and India split into India and Pakistan, then Bangla Desh broke away from Pakistan. A few years later, the Soviet Union disintegrated into sixteen pieces. Then came the turn of Czechoslovakia and Yugoslavia. From fifty members in 1945 the United Nations has grown to 192.

Why these two conflicting trends, and what do they have in common? Both globalization and fragmentation are the result of the revolution in communications that was already apparent in Gandhi's lifetime and has since become overwhelming. Without easy, fast, and inexpensive communications, the world economy as we know it would be inconceivable. At the same time, the new communications media carry ideas, among which is the powerful concept of nationalism. Nationalism has fragmented the political world. Nationalism may be a reaction to globalization, but it is also its offspring. As in the former British Empire, so also today the new communications media and the resulting flow of information are both the means of economic and cultural homogenization, and the instruments of political fragmentation.

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